

CLAIMS

1. A method of generating energy profiles for a specific task in a processing device executing multiple tasks, comprising the steps of:
 - 2 receiving a first task identifier indicative of an active task in a processing component;
 - 4 storing a second task identifier indicating a task to be monitored;
 - 6 comparing the first and second task identifiers and generating a predetermined signal if the first and second task identifiers match;
 - 8 measuring activity of certain devices responsive to said predetermined signal.
2. The method of claim 1 wherein said measuring step comprises the step of enabling one or more counters responsive to said predetermined signal.
3. The method of claim 1 and further comprising the step of updating an energy profile associated with the task to be monitored.
4. The method of claim 3 wherein said updating step comprises the step of updating an energy profile responsive to said measuring step during operation of said processing device.
5. The method of claim 4 and further comprising the step of executing a plurality of tasks in accordance with a scenario defining scheduling of said plurality of tasks and modifying said scenario responsive to said step of updating an energy profile.
6. The method of claim 1 and further comprising the step of performing a debugging operation responsive to said measuring step.
7. A processing device for multitasking multiple tasks comprising:
 - 2 circuitry for receiving a first task identifier indicative of an active task in a

processing component;

- 4 a memory for storing a second task identifier indicating a task to be monitored;
- 6 a comparator for comparing the first and second task identifiers and generating a predetermined signal if the first and second task identifiers match;
- 8 circuitry for measuring activity of certain devices responsive to said predetermined signal.

8. The processing device of claim 7 wherein said measuring circuitry
2 comprises the one or more counters that are enabled or disabled by to said
predetermined signal.

9. The processing device of claim 7 wherein data from said circuitry
2 for measuring activity updates an energy profile associated with the task to be
monitored.

10. The processing device of claim 9 wherein said energy profile is
2 updated during operation of said processing device.

11. The processing device of claim 10 wherein said plurality of tasks
2 are executed in accordance with a scenario defining scheduling of said plurality
of tasks and said scenario is updated responsive to said step of updating an
4 energy profile.

12. The processing device of claim 7 and further comprising circuitry
2 for implementing a debugging operation responsive to a value in said measuring
circuitry.

13. A mobile communications device comprising:
2 an antenna for receiving and transmitting signals; and
4 receiver/transmitter circuitry coupled to said antenna for sending and
receiving audio and data signals, said receiver/transmitter circuitry including a

processing circuit comprising:

- 6 circuitry for receiving a first task identifier indicative of an active task in a processing component;
- 8 a memory for storing a second task identifier indicating a task to be monitored;
- 10 a comparator for comparing the first and second task identifiers and generating a predetermined signal if the first and second task identifiers match;
- 12 circuitry for measuring activity of certain devices responsive to said predetermined signal.